

Spectrally-Tunable Infrared Camera Based on Highly-Sensitive Quantum Well Infrared Photodetectors, Phase II

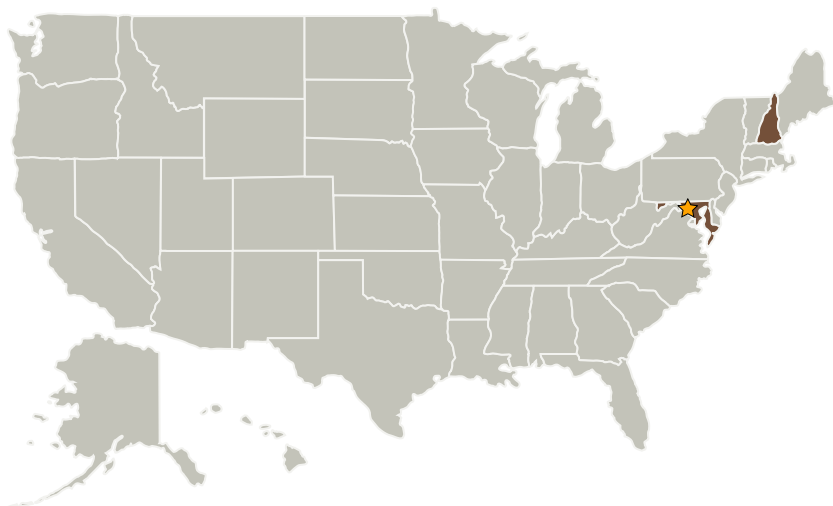
Completed Technology Project (2008 - 2010)



Project Introduction

We propose to develop a SPECTRALLY-TUNABLE INFRARED CAMERA based on quantum well infrared photodetector (QWIP) focal plane array (FPA) technology. This will build on the handheld QWIP camera we DELIVERED to NASA in Phase 1 which featured a 320x256 QWIP FPA with fixed spectral response, as proof of this novel sensor technology. Phase 2 will broaden spectral coverage (~ 6 - 12 microns), expand array format to 640x512 (for wider field-of-view), shrink pixel pitch (for higher image spatial resolution), and incorporate a cooled filter wheel with 6 to 8 spectral bands. We will integrate the FPA with dewar/cooler/electronics/optics and deliver the resulting wideband camera to NASA for spectroscopic/imaging studies in this spectral range

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Goddard Space Flight Center (GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
QmagiQ, LLC	Supporting Organization	Industry	Nashua, New Hampshire



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Primary U.S. Work Locations

Maryland

New Hampshire

Project Transitions



May 2008: Project Start



December 2010: Closed out

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.1 Detectors and Focal Planes